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William C. Tritt
Renner, Otto, Boisselle & Sklar, LLP
Nineteenth Floor
1621 Euclid Avenue
Cleveland, OH 44115-2191

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| EXAMINER |
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DESAI, ANISH P

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| ART UNIT | PAPER NUMBER |
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1771

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,808

Applicant(s)

BILODEAU, WAYNE L.

Examiner

Anish Desai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 21-36 and 38-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 37, and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The applicant's arguments in response to the Office action dated 10/19/05 have been fully considered and are persuasive.

1. The 112 claim rejections of claims 34-36 are considered moot because they are drawn to non-elected species in view of the restriction made on 04/06/2006.
2. The obviousness type rejections over Arnold (US Patent 4,517,044) and Handbook of Adhesives and Sealants by Petrie, E.M. are withdrawn in view of the present amendments and response (see pages 12-21 of 01/17/06 amendments). The combination of Arnold and Handbook of Adhesives and Sealants by Petrie does not provide reasonable expectation of success. However, upon further consideration a new ground of rejection is made in view of Miyazaki et al. (US 5,863,624).
3. Applicant's election with traverse of an adhesive species and a curing agent in the reply filled on 05/02/2006 is acknowledged. Claims 1-20, 37, and 43 read on the elected species.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6-9, 11, 12, 17, 18, 20, and 37 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miyazaki et al. (US 5,863,624) as evidenced by Kittel et al. (US 6,228,486 B1) (column 2, lines 66-67, column 3, lines 1-6, lines 60-61) and Handbook of Adhesives and Sealants by Petrie, E.M. (page 360).

Miyazaki teaches a can covering polyester film, which is bonded under heat to a metal surface of a can through a thermosetting resin adhesive to form a protective coat, wherein the adhesive layer is formed of a resin comprising epoxy resin and hardener (abstract). The epoxy resin and hardener of Miyazaki read on an adhesive layer derived from at least one two-part curable adhesive as claimed in claim 1. Regarding claims 17 and 37, the recitation "an epoxy resin and a primary amine, a carboxylic acid or a carboxylic anhydride or a mixture of two or more thereof" is interpreted as any

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reference disclosing an adhesive comprising an epoxy resin and any single or a mixture of two or more of chemical species (i.e. primary amine, a carboxylic acid, and carboxylic anhydride) will read on claim 17. With respect to claims 1, 17, and 37 Miyazaki discloses epoxy resin and acid anhydride hardeners such as tetracarboxylic anhydride, methylcyclohexane dicarboxylic anhydride (column 4, lines 26-30). Further with respect to claims 1, 7, 8, and 37, Miyazaki discloses a biaxially oriented polyethylene terephthalate film (column 6, lines 23-24). Although Miyazaki does not explicitly teach "high solids" adhesive, it is reasonable to presume that the thermosetting adhesive of Miyazaki contains "high solids" because like material has like property. The curable adhesive of the applicant comprises epoxy resin and curing agent (hardener) such as carboxylic anhydride (specification). Miyazaki also teaches thermosetting (i.e. curable) adhesive comprising epoxy resin and anhydride hardeners such as tetracarboxylic anhydride and methylcyclohexane dicarboxylic anhydride (column 4, lines 26-30). With respect to claim 2, the limitation of "without application of an external energy source" is considered to be a process limitation and not a structural part of the article claims. Thus in absence of showing any criticality of curing of adhesive without the applicant of an external energy source, no patentable weight is given to the recitation "without application of an external energy source".

With respect to claim 6, Miyazaki teaches the claimed invention except that the coat weight of the adhesive layer is from about 5 to about 30 g/m², however since the coating weight is recognized as a result-effective variable, differences in coating weight will not support the patentability of subject matter encompassed by the prior art unless

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there is evidence indicating such concentration is critical or provides unexpected results. The examiner recognizes that a reference must teach a variation in the coat weight before it can be recognized as a result effective variable. Note that Miyazaki teaches adhesive having coat weight of 2.5 g/m^2 (column 12, line 21) and 2.0 g/m^2 (column 17, lines 36-37). Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the coating weight of the adhesive from 5 to about 30 g/m^2 , motivated by the desire to provide a sufficient adhesion between the adhesive layer and a substrate.

With respect to claim 9, although, Miyazaki does not explicitly teach that the upper surface of the polymer facestock is corona treated, it is known in the art that corona treatment improves the printability of the film surface as evidenced by Kittel et al. (US 6,228,486 B1) (column 2, lines 66-67, column 3, lines 1-6, lines 60-61). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to corona treat the upper surface of the polyester film of Miyazaki, motivated by the desire to improve the printability of the film surface. Regarding claim 11, Miyazaki teaches that the polyester film may be printed for giving the can a good aesthetic appearance (column 6, lines 15-16). Further Miyazaki teaches that the printed layer may be provided between the polyester film and the overcoat layer (column 6, lines 28-29). With respect to claim 12, Miyazaki discloses a transparent overcoat layer (column 11, lines 14-15). Regarding claim 18, Miyazaki teaches an epoxy-modified polyester resin that can be used as an adhesive (column 4, lines 53-55). With respect

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to claim 20, although Miyazaki does not explicitly teach the reactive diluent, it is known in the art to add reactive diluent to epoxy based adhesive to adjust the viscosity of epoxy adhesives as evidenced by Handbook of Adhesives and Sealants by Petrie, E.M. (page 360). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the reactive diluent to the epoxy based adhesive of Miyazaki, motivated by the desire to adjust the viscosity of the adhesive so that adhesive can be applied with ease.

5. Claims 1, 4, 5, 18, 19, and 43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Le Compte (US 3,723,223).

Le Compte teaches an adhesive material prepared by applying to a carrier a blend of solid epoxy resin and solid curing agent (abstract). The carrier can be any sheet material such as polyethylene (column 4, line 4). Regarding claims 1, 18, 19, and 43, Le Compte discloses adhesive such as tetrafunctional polyglycidyl ethers of teraphenylene (tradename EPON 1031) (column 1, line 68 and column 2, line 1) and hardeners such as paraphenylene diamines (column 2, line 16). Regarding claims 4 and 5, although Le Compte does not explicitly teach the adhesive has an initial tack sufficient to remain in a position when applied to a substrate and when the two part curable adhesive has viscosity in the range of from about 30,000 cps to about 120,000 cps when the adhesive is applied to the label, it is reasonable to presume that the adhesive of Le Compte has sufficient initial tack so that it remains in a position when applied to a substrate and have viscosity in the range of from about 30,000 cps to about

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120,000 cps, because like material has like property. The applicant and Le Compte teach the same adhesive (e.g. EPON 1031, see page 16 line 22 of specification) and same hardener (curing agent) such as paraphenylene diamine (page 19, line 1 of specification). Thus, the claimed features of sufficient tack and viscosity of from about 30,000 cps to about 120,000 cps would have been inherently present.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Le Compte (US 3,723,223) in view of Pocius et al. (US 4,521,490).

The invention of Le Compte is previously disclosed. Le Compte is silent as to teaching of adhesive comprising a tackifier or plasticizer. However, Pocius teaches a solventless adhesive epoxy composition (column 3, lines 5-8). Further, Pocius teaches that various other materials such as plasticizers can be added to the composition to alter or even improved the characteristics of the cured adhesive (column 14, lines 9-13). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the plasticizers of Pocius in the solid epoxy based adhesive composition of Le Compte because it is known in the art to add plasticizers in the epoxy based adhesives. Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add plasticizers of Pocius in the adhesive of Le Compte, motivated by the desire to improve the characteristics of the cured adhesive.

7. Claims 1, 11, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dornbusch et al. (US 4,883,697) as evidenced by Al et al. (US 3,915,478).

Dornbusch teaches a flexible multilayer label (abstract). The label of Dornbusch comprises a thermoplastic label stratum (column 6, lines 1-2 and column 6, lines 49-50). Additionally, Dornbusch discloses that the thermoplastic label stratum is laminated to an upper surface of stress-compensating stratum via epoxy-type urethane type adhesive (column 5, lines 54-64). The epoxy-type urethane type adhesive of Dornbusch reads on two-part curable adhesive as claimed. The recitation "two-part" is interpreted as any adhesive comprising two chemical species.

Although Dornbusch does not explicitly disclose adhesive layer derived from "high solids" adhesive, it is reasonable to presume that the epoxy-type urethane type adhesive of Dornbusch is "high solids" adhesive because like material has like property. The adhesive of the applicant is polyurethane modified epoxy resin (specification page 17). Dornbusch also teaches epoxy-type urethane type adhesive. Thus, epoxy-type urethane type adhesive of Dornbusch reads on the "high solids" adhesive as claimed.

Regarding claim 11, Dornbusch teaches it is desired to include special ornamental label effects such as printed and metallic portions (column 6, lines 63-64). Regarding claim 14, Dornbusch discloses a protective layer such as polyethylene film (column 7, lines 13-15). Although Dornbusch does not explicitly disclose that polyethylene film is chemical resistant, it is known in the art that polyethylene is chemical resistant as evidenced by Al et al. (US 3,915,478) (column 2, lines 49-53).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dornbusch et al. (US 4,883,697) in view of Alonso (US 4,654,262).

The invention of Dornbusch is previously disclosed. Dornbusch is silent as to teaching of a barrier or tie coating layer between the polymer face stock and the two-part curable adhesive. However, Alonso teaches coupling agents (primer) that can be applied to the surface of a polyolefin resin to modify the surface of the polyolefin resin highly receptive to adhesion (abstract). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the coupling agents of Alonso on the surface of the thermoplastic label stratum of Dornbusch, motivated by the desire to enhance the adhesion between the thermoplastic label stratum and the adhesive of Dornbusch.

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dornbusch et al. (US 4,883,697) in view of Sackoff et al. (US 4,151,319).

The invention of Dornbusch is previously disclosed. Dornbusch further discloses a protective layer formed of polyethylene (column 7, lines 13-14). Dornbusch is silent as to teaching of a transparent protective layer comprising a polyamide, polyurethane, cellulosic polymer, silicone polymer, or any combination thereof as claimed. However, Sackoff teaches pressure sensitive adhesive coated laminates such as labels (abstract). Additionally, Sackoff teaches it is possible to use a top layer which is a substantially transparent sheet of a protective film e.g. polyethylene, urethane etc. (column 8, lines 10-11). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the urethane based transparent protective film of

Sackoff in place of polyethylene based protective sheet in the invention of Dornbusch, because polyethylene and polyurethane have been shown in the art to be recognized equivalent protective films for the labels.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dornbusch et al. (US 4,883,697) in view of Musclow et al. (US 5,380,587).

The invention of Dornbusch is previously disclosed. Dornbusch is silent as to teaching of an adhesion promoting layer between the upper surface of the polymer facestock and the print layer. However, Musclow teaches a printable film structure comprising a polymeric film substrate having on at least one surface thereof a prime coating (abstract). Further Musclow teaches a multilayer packaging or label stock film having excellent printability and non-blocking characteristics. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a prime coating of Musclow and apply it on the surface of the thermoplastic label stratum of Dornbusch, motivated by the desire to enhance the bonding between the printed matter and the label stratum.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dornbusch et al. (US 4,883,697) in view of Shih et al. (US 6,153,288).

The invention of Dornbusch is previously disclosed. Dornbusch is silent as to teaching of a layer of ink receptive composition between the upper surface of the polymer facestock layer and the print layer. However, Shih teaches coatable ink-receptive compositions and coated substrates such as labels (abstract). According to Shih et al., improvements are seen in color density, resolution, color gradient, drying

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time, smudgeproofness, and water-fastness (column 1, lines 63-65). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a layer of ink receptive composition in the invention of Dornbusch, motivated by the desire to enhance the color density, resolution, color gradient, drying time, smudgeproofness, and water-fastness of the printing on the label of Dornbusch.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

APD


**HAIVO
PRIMARY EXAMINER**